

REMARKS:

This paper is herewith filed in response to the Examiner's Office Action mailed on December 1, 2009 for the above-captioned U.S. Patent Application. This office action is a rejection of claims 31-32, 35-36, 38, 40-41, 49-50, 52, 55-56, 58-60, 62-65, 67-68, 70-71, 73-74, 77, 82-84, 98-102, 105, and 128 of the application.

More specifically, the Examiner has rejected claims 31-32, 35-36, 38, 40-41, 49-50, 52, 55-56, 58-60, 62-65, 67-68, 70-71, 73-74, 77, 82-84, 98-102, 105, and 128 under 35 USC 103(a) as obvious over the combination of Ray (US 6,424,638) with either Keski-Heikkilaet (US 6,882,844) or Vikberg (US 6,925,074) and further with teachings of Ritter (US 6,289,221). The Applicant respectfully disagrees with the rejection.

Further, the Applicant notes that the Examiner has indicated that claims 61 and 103 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Applicant thanks the Examiner for this indication of allowance.

Claims 31, 36, 38, 49-50, 55-56, 60-65, 70-71, 73, 82, 84, 98, and 101 have been amended. Support for the amendments can be found at least on page 11, line 15 to page 12, line 13 and page 14, lines 1-8 of the application as filed. Claims 67-68 and 77 are cancelled without prejudice. No new matter is added.

Although the Applicant does not expressly or impliedly agree with the rejections, the Applicant submits that in order to facilitate the prosecution of this patent application towards allowance each of the independent claims 31, 49, 55, 82, and 98 have been amended in a somewhat similar fashion. For example, claim 1 now recites:

An apparatus, comprising: at least one processor; and at least one memory including computer program code, where the at least one memory and the

computer program code are configured, with the at least one processor, to cause the apparatus to at least: identify an access point of a first telecommunication network as being a neighbor cell to a second telecommunication network by transmitting identity information for the access point of the first telecommunication network using a cell identity information structure of the second telecommunication network, wherein the first telecommunication network is a different radio technology than the second telecommunication network and wherein the transmitted identity information comprises a location area code associated with the second telecommunication network.

The Applicant submits that claim 31 has been amended to recite features similar, at least in part, to claim 36. In accordance with the exemplary embodiments of the invention identity information can be transmitted (for example broadcast) by a device, such as an access point, in a first telecommunication network using a cell identity information structure of a second telecommunication network, wherein the first telecommunication network is a different radio technology than the second telecommunication network. Further, in accordance with the exemplary embodiments of the invention the transmitted cell identity information can include a location area code associated with the second telecommunication network. The location area code can be used, for example, to indicate a region (for example a group of cells) to limit a geographical extent of communications. The Applicant submits that the amendments are supported at least on page 11, line 15 to page 12, line 13 and page 14, lines 1-8 of the application as filed. The Applicant submits that amended claim 31 is patentably distinguishable from the references cited.

With regards to the rejection of claim 36, now incorporated at least in part in claim 31, the Examiner states:

“With further regard to claims 36, 59 and 77 84. and 101. the combination of Ray, Keski-Heikkilaet and Ritter together teaches wherein the cell identity of the second network comprises at least one of frequency, BTS ID or location area (eg. Ritter teaches transmitting frequency information, eg. carrier, see figures 4, 5 and 6),” (see page 6 of the Office Action).

The Applicant disagrees. Figures 4 of Ritter simply illustrate a radio frequency spectrum

occupied by each of three carriers used for a TD/CDMA system and Figure 5 illustrates a frequency spectrum associated with TD/CDMA carriers and a base station communicating via a GSM system (see col. 7, line 55 to col. 8, line 2). It is noted that with regards to Figure 5 Ritter discloses "In this configuration two carrier frequencies are assigned to each of the cell sectors, to provide an increase in the capacity provided by the base station, for a case where the base station is operating in a "hot spot" in which an increase in capacity is required," (col. 8, lines 2-6). However, the Applicant submits that Ritter does not teach at least where claim 31 relates to transmitting identity information for an access point in a first communication network using a cell identity structure of a second communication network, wherein the transmitted identity information comprises a location area code associated with the second telecommunication network. Rather, Ritter simply discloses that two carrier frequencies are assigned to each cell sector to provide an increase in the capacity provided by the base station. Further, the Applicant submits that neither Ray nor Keski-Heikkilaet overcome this shortfall of Ritter.

The Applicant submits that, for at least the reasons stated, the rejection should be removed and claim 31 should be allowed.

In addition, the Applicant submits that, for similar reasons, the foregoing amendments to the independent claims 49, 55, 82, and 98 also place these claims in condition for allowance in view of the references cited. Therefore the Examiner is requested to remove the rejections and allow these claims.

Further, the Applicant submits that the references cited do not disclose or suggest at least where claim 31 recites in part:

"a processor and a transmitter configured to identify an access point of a first telecommunication network as being a neighbor cell to a second telecommunication network by transmitting identity information for the access point of the first telecommunication network using a cell identity information structure of the second telecommunication network, wherein the first telecommunication network is a different radio technology than the second telecommunication network and wherein the transmitted identity information

comprises a location area code associated with the second telecommunication network.”

In the rejection the Examiner states:

“Ray teaches an apparatus/processor and transmitter for a first telecommunication network (Abstract teaches a mobile handing over between two different networks via two different base stations/[apparatuses]/processors/access points), the apparatus comprising:

a data store/processor to store [...] and identify an access point (eg. cell identity information} for a cell/access point of the first telecommunication network (Figure 1, shows an HLR #26 and VLR #16),

wherein the apparatus/processor is configured to allow the cell/access point of the first telecommunication network to be identified as being a neighbor (eg. a neighboring cell} of the second telecommunication network (Abstract teaches serving and target MSC’s which inherently infers a target ETS/cell which will support the mobile after handoff. The examiner notes that neighbor lists are well known in cellular networks and inherently include a list of BTS’s the mobile can handoff to, depending upon their location and signal strength), and the first network using a different radio technology than the second network (eg. a dual mode phone communicating with two different ETS’s supporting different protocols, AMPS vs. GSM or GSM vs. ODMA, etc),” (see page 3 of the Office Action)

The Applicant disagrees. The Applicant submits that Ray does not disclose or suggest at least where claim 31 relates to transmitting identity information for the access point of the first telecommunication network using a cell identity information structure of the second telecommunication network.

Ray is directed to an inter-system handover (title) in which an Internet telephony system is used for performing a handover between different types of systems (abstract). Figure 3 most clearly illustrates the Ray concept, and the signaling diagrams 2B and 4 are consistent with the illustrated system at Figure 3. The Applicant notes that as detailed at col. 4 lines 55-65, a currently serving GSM MSC 14a sends an identity message 315 (X, Y coordinates) for the GSM base station 25a to an Internet Gatekeeper 320. The Internet Gateway 310a, through which the message is sent,

converts it to IP protocol. At col. 5 lines 7-12, 23-26 and 36-42, the Internet Gatekeeper checks a database 325 of wireless systems to find another wireless system close to the GSM base station 25a and finds one 25b. At col. 6 lines 1-11 and 21-39, the Internet Gatekeeper 320 returns the list of possible neighbors to the original MSC 14a, a cell 14b is selected and the original MSC 14a contacts the MSC 14b associated with the selected target base station 25b for a handover of the mobile station 20. The Internet Gateway 310b associated with the other wireless system (D-AMPS in Ray) converts the IP message into an equivalent D-AMPS message for the target MSC 14b. Actual handover of the MS 20 occurs via normal Handover Command and Handover Complete messages (col. 6 lines 51-56). In no instance does any BTS of Ray transmit cell identity information for a BTS of one network/radio technology using a structure of the opposing BTS's network/ radio technology. Further, the Applicant submits that the Gateways/Gatekeeper do not wirelessly transmit anything.

Thus, the Applicant submits that, for at least these reasons, Ray does not disclose or suggest wherein claim 31 relates to transmitting identity information for the access point of the first telecommunication network using a cell identity information structure of the second telecommunication network, wherein the first telecommunication network is a different radio technology than the second telecommunication network.

Further, the Applicant notes that the rejection states that “but [Ray] is silent on and a cell identity information structure of a second telecommunication network” (see page 4 of the Office Action). Then, apparently, to attempt to overcome this admitted shortfall of Ray the rejection cites Vikberg, Keski-Heikkilaet, and Ritter.

The Applicant submits that Vikberg teaches a high speed access point which ‘mimics’ a cellular BTS in regard to the information it broadcasts, citing to col. 5 lines 5-30. Respectfully, those teachings of Vikberg as quoted in the final office action at pages 6-7 do not relate to the presently claimed ‘structure’ of the first/second telecommunication network in which the cell identity information is transmitted. The cited teachings simply refer to the cells of a Bluetooth system being defined similarly as those of a conventional GSM BTS. The Applicant submits that this

relates to the architecture of the system/cell, and not to the format of the messages being transmitted. As seen at Figure 1, Vikberg's mobile terminal MT 1 can access a GSM network 10 via the base station subsystem BSS 101 (col. 4 lines 15-32) or alternatively can access the fixed access network 10' via a home base station HBS 104 that uses unlicensed spectrum such as for example WLAN, DECT or Bluetooth (col. 4 lines 38-62). In either connection mode the MT 1 can access the core network portion 20. The HBS 104 does not transmit using a GSM format/structure, nor does the BSS 101/BTS 103 transmit using a WLAN/DECT/Bluetooth structure. What the cited teachings of Vikberg describe is that the coverage area for the HBS 104 using the unlicensed spectrum is similar in concept to the coverage area of the conventional BSS 101/BTS 103 of the GSM system. That both WLAN/DECT/Bluetooth and GSM use a similar concept for access node and cell area coverage is not particularly relevant to, and in no way renders obvious, an access node in one system transmitting identity information using a structure/format of a different system/radio technology (or transmitting identity information for an access node operating in a different radio technology using a structure/format of the transmitting node's own system/radio technology).

Further, the Applicant submits that Keski-Heikkilaet is cited for the proposition that a common cell ID format can render obvious the above noted and presently claimed 'structure' of the first/second telecommunication network in which the cell identity information is transmitted. Respectfully, to read this teaching as rendering the claimed "structure" as obvious improperly reads the limitation out of the claim. The claim does not recite that there is a common structure but that the identity of the cell in the one network/radio technology is transmitted using the structure of the other network/radio technology. That there is a permanent and common cell ID in Keski-Heikkilaet is beside the point, that cell ID information must still be transmitted if in fact the Keski-Heikkilaet teachings are to render obvious the independent claims as amended herein. But Keski-Heikkilaet does not teach that there is a common format or structure by which the permanent/common cell ID is transmitted, and so this reference does not teach or suggest the presently claimed 'structure' of the first/second telecommunication network in which the cell identity information is transmitted.

Ritter is cited for the broad proposition that there is a common BSC/MSC architecture when each neighboring cell is both GSM and TD/CDMA capable as in Ritter's Figure 1. This mere commonality is insufficient for obviousness given the independent claims as amended herein, because Ritter does not teach that the GSM radio of one BS transmits the cell ID for a neighbor TD/CDMA BS using the GSM format (or alternatively the TD/CDMA radio of one BS transmits the cell ID for a neighbor GSM BS using the TD/CDMA format) as would be minimally necessary to approach the amended claim language. Since not all neighbor cells will be both GSM and TD/CDMA capable, and more importantly not every mobile will be dual GSM/TD-CDMA capable, the cell ID for the cell operating with GSM is not the same ID as that same cell operating with TD/CDMA, else cell ID distribution would have to be coordinated among all TD/CDMA and all GSM cells for all different operators.

The Applicant submits that Ritter also teaches away from the subject invention because there is no need to handover between TD/CDMA and GSM since each of the BSs Ritter considers is dual capable. One cell can handover to another in either GSM or TD/CDMA, and if the need arises to change radio technologies for a mobile terminal the changeover can occur while the mobile terminal is within the cell, thus avoiding the need to transmit additional cell IDs in the different radio technology formats, the motivation to do so being to save scarce radio spectrum.

The Applicant submits that, for at least these reasons, neither Vikberg nor Keski-Heikkilaet nor Ritter, alone or combined, overcome the shortfalls of Ray as stated above.

In addition, the Applicant submits that the proposed combination of the references is improper. This is seen to be the case for at least the reason that the proposed modification of Ray appears to disregard the operations of the Internet Gateway/Gatekeeper in Ray, as stated above. Thus, the Applicant respectfully re-submits the argument, as presented in the previous Response filed on October 2, 2009, that to modify Ray so as to dispense with the need for the Internet Gateway/Gatekeeper aspects, as appears to be the case in the rejection, is to change its entire principle of operation, a modification not allowed under the constraints of obviousness (MPEP 2143.01 part VI). This is true regardless of the substance of other references.

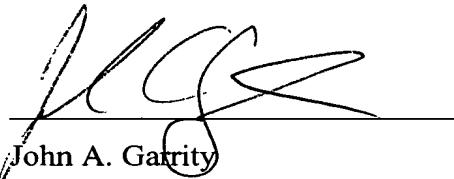
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The Applicant submits that, for at least the reasons stated above, the rejection of claim 31 is improper and the rejection should be removed.

Further, the Applicant submits that each and every claim presented herein patentably distinguishes over the cited references, alone (Ray) or in combination with any other reference(s) of record, for reasons set forth above.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record. Should any unresolved issue remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

Respectfully submitted:



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Date